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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,934	12/29/2000	James Neal Richter	55564.80303	8042

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EXAMINER	
CHEN, TE Y	

ART UNIT	PAPER NUMBER
2161	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/751,934	RICHTER ET AL.	
	Examiner	Art Unit	
	SUSAN Y. CHEN	2161	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03/05/2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-2, 4-12 and 14-22, 27-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-12,14-22,27 and 28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Amendment

This office action is in response to the amendment filed on March 05, 2009 and Jan. 16, 2009.

Claims 1-2, 4-12 and 14-22, 27-28 are pending for examination. Claim 1 has been amended. Claims 3, 13, and 23-26 have been canceled.

Specification

The specification filed on Jan. 16, 2009 has been noted and placed on record.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

As set forth in MPEP 2106(II)A:
Identify and understand Any Practical Application Asserted for the Invention The claimed invention as a whole must accomplish a practical application. That is, it must produce a “useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96),' In re Ziegler, 992, F.2d 1 197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 199334. Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful.
Apart from the utility requirement of 35 U.S.C. 101, usefulness under the patent eligibility standard requires significant functionality to be present to satisfy the useful result aspect of the practical application requirement. See Arrhythmia, 958 F.2d at 1057, 22 USPQ2d at 1036. Merely claiming nonfunctional descriptive material stored in a computer-readable medium does not make the invention eligible for patenting. For example, a claim directed to a word processing file stored on a disk may satisfy the utility requirement of 35 U.S.C. 101 since the information stored may have some "real world" value. However, the mere fact that the claim may satisfy the utility

> requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.
> The claimed invention is subject to the test of State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Specifically State Street sets forth that the claimed invention must produce a "useful, concrete and tangible result". The Interim Guidelines for Examination of Patent Applications for Patent Subject Maher Eligibility states in section IV C. 2 b. (2) (on page 21 in the PDF format): The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a §101 judicial exception, in that the process claim must set forth a practical application of that §101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had "no substantial practical application").

Claims 1-2, 4-12 and 14-16, and 27-28, are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As to claims 1-2, 4-12 and 27-28, these claims recite a “mapping method of classifying a plurality of information items in an information retrieval system” at the preamble, however, the body of the claims fail to reflect any mapping or classifying utility as cited in the preamble, as such, these claims merely represent an abstract idea that fails to provide a practical real-world application.

As to claims 14-16, these apparatus claims recite the limitations of instant invention in form of means plus functions, however, the instant disclosure fails to map the specific physical means to the claimed functions, as such, the claimed means seemed to be software per se without having any hardware device to perform the claimed functions, which render the claimed subject matters as non-statutory. In re Bilsky.

To expedite a complete examination of the instant application the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-2, 4-12, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 1, what does the claimed “said ensemble of algorithms” refer to (i.e., this claim cited “applying an ensemble of algorithms to determine an integer-values weight of first and second information items” at lines 6-7, what is the metes and bounds of the claimed “algorithms”? How to ensemble the claimed algorithms?) Furthermore, what is the claimed “the output of said ensemble of algorithms” (i.e., Because applicant fails to specify what algorithms was ensemble, thus, it renders the output of the claimed subject matter to be indefinite).

As to claim 9, what does it meant by "said relationship link is positioned in a list in direct proportion to the degree of consensus among said ensemble of algorithms" (i.e., what is the metes and bounds of the claimed "a list" and "ensemble of algorithms"? which unit measure the degree of consensus among said ensemble of algorithms and how to do it?)

As to claims 2, 4-12 and 27, these claims have the same defects as their base claim 14, hence are rejected for the same reason.

Because the ambiguous nature of instant invention, the following art rejection is to the best that the examiner is able to ascertain.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-2, 4-12, 14--22 and 27-28, are rejected under 35 U.S.C. 103(a) as being unpatentable over Horvitz et al. (U.S. Patent No. 6,182,133) in view of Wical (U.S. Patent No. 5,940,821).

As to claim 1 and 28, Horvitz et al. (hereinafter referred as Horvitz) discloses a method as claimed by applicant, comprising:

identifying a first/second informational item; [e.g., the use of URL and a web search engine to identify user's favorite pages at col. 1, lines 41-43 & col. 43, lines 57-63];

applying an ensemble of algorithms to determine a relationship link between said first and second informational items [e.g., a statistical analyses of usage log data of a user model including Bayesian models at col. 27, lines 28 – col. 28, lines 30, col. 43, lines 9-37];

detecting an access of first information item [e.g., the Web Server Application Programs 80, Fig. 1; Fig. 16 and associated text; col. 47, lines 9-18];

detecting an access of a second informational item [e.g., the Browser Application program 30, Fig. 1; Fig(s) 6 and associated text];

establishing that a relationship link exists between said first informational item and second informational item [e.g., the use of hypertext link to establish relationship between Web pages at col. 1, lines 47-59; the hotlink at col. 8, line 31- col. 9, line 7].

determine an integer-weight based on the historical frequency of the relationship link [e.g., the user modeling processing that determines the numerical ranking of URLs based on historical logged data of page transitions across all individuals site visiting activities or Bayesian model encoding processing at col. 4, lines 30-47];

applying an ensemble of algorithms to said first informational item and said second informational item [e.g., User modeling comprising the Bayesian model or a

Hidden Marko model that collectively containing a set of predefined rules or functions to generate a weight (or likelihood estimates) applied over a set of URLs and /or corresponding web page components at col. 28, lines 8-14];

assigning the weight (or likelihood estimates) to the output of said ensemble of algorithms [e.g., col. 43, lines 9-37];

storing the output of said ensemble of algorithms [e.g., the units: 1605, 1608, 1660, Fig. 16 and associated texts].

Horvitz does not specifically disclose that the weight (or likelihood estimates) is related to an integer-value.

However Wical (U.S. Patent No. 5,940,821) discloses an information item retrieval system with the link relationship weight represented as integer [e.g., Abstract, col. 12, lines 15 – 51; Fig(s). 4, 9a and associated texts].

Horvitz and Wical are both endeavor to optimize an informational document classification mapping of an information query and retrieval system via managing World Wide Web page browsing and correlation activities over open network, therefore, with the teachings of Horvitz and Wical in front of him/her it would have been obvious for an ordinary skilled person in the art at the time the invention was made to be motivated to apply the well known integer-value weight as disclosed by Wical into Horvitz's information retrieving and classification system, because by doing so, the combined system will be upgraded to have integer-value weight associate with the relationship link between informational items, such that it would facilitate the outcome calculation of

ensemble algorisms during informational items classification mapping of the combined system.

As to claim 2, except all the features recited in claim 1 above, the combined system of Horvits and Wical further discloses that the step of identifying and detecting the second informational item includes the identifying and detecting of a plurality of informational items [e.g., Horvits: the web server, col. 1, lines 41-67, col. 4, lines 20-47].

As to claims 4 and 27, except all the features recited in claim 2 above, the combined system of Horvits and Wical further discloses that the step of applying an algorithm for data aging wherein the usage of the relationship link is monitored and used as feed back for the weight associated with the relationship link [e.g., Horvits: col. 5, lines 38-52]; wherein, the data aging runs as a function of traffic load to age the relationship links according to relevance of the relationship links [e.g., Horvits: Fig.(s) 17A-C and associated texts].

As to claims 5-6, except all the features recited in claim 4 above, the combined system of Horvits and Wical further discloses that the step of applying a repeatedly pruning algorithm wherein external information regarding the usefulness of at least one relationship link is utilized to modify the existence of a recorded relationship link and determine if a recorded relationship link should be removed [e.g., Horvits: the refinement processing at col. 4, lines 50-62; col. 5, lines 11-18; lines 55-60].

As to claim 7, except all the features recited in claim 5 above, the combined system of Horvits and Wical further discloses that the step of applying said pruning algorithm makes use of a user determined feedback of the usefulness of a relationship [e.g., Horvits: col. 28, lines 3-22].

As to claim 8, except all the features recited in claim 2 above, the combined system of Horvits and Wical further discloses that said ensemble includes a plurality of algorithms and wherein said relationship link integer-value weight is adjusted in direction proportion to the number of algorithms within said ensemble of algorithms that determine the existence of said relationship link [e.g., Wical: Fig. 5 and associated texts].

As to claim 9, except all the features recited in claim 2 above, the combined system of Horvits and Wical further discloses that said relationship link is positioned in a list in direct proportion to the degree of consensus among said ensemble of algorithms [e.g., Horvits: col. 10, lines 47-61].

As to claim 10, except all the features recited in claim 2 above, the combined system of Horvits and Wical further discloses that said ensemble includes a plurality of algorithms and each of said algorithms runs independently of all other algorithms [e.g., Horvits: col. 11, lines 6-12].

As to claim 11, except all the features recited in claim 2 above, the combined system of Horvits and Wical further discloses the step of merging the outputs of said ensemble of algorithms [e.g., Horvits: col. 12, lines 1-20, Fig. 2 and associated texts].

As to claim 12, except all the features recited in claim 2 above, the combined system of Horvits and Wical further discloses the step of recording said relationship link in a non-Bayiesian-type network [e.g., Wical: the unit 115, Fig. 2 and associated texts; Fig. 4 and associated texts].

As to claims 14-22, these claims recited the same features as claims 1-12 and 27 in form of computer apparatus or a readable storage medium product, hence are rejected for the same reason.

Response to Arguments

Applicant's arguments based on newly amended limitations as filed on 03/05/2009 and 01/16/2009, have been fully considered but they are not persuasive.

The examiner disagrees with applicant's arguments under 35 U.S.C. § 101 rejections. In response to these arguments the examiner points out that applicant's did not specifically defined the links among the claimed establishing or determining process with "a mapping type of method" as argued in the instant specification. Furthermore,

none of claims 1-2, 4-12 and 14-16, and 27-28 is tied to a physical machine/device or transforms a particular article to a different state or things, hence, these claims merely direct to non-statutory. In re Bilsky.

The examiner further disagrees with applicant's arguments under 35 U.S.C. 112, second paragraph rejections. As set forth above, because applicant failed to define the metes and bounds of the claimed "algorithms" and the output of the claimed algorithms? In addition, the disclosure failed to disclosed How to ensemble the claimed algorithms? Thus, the rejections are maintained.

As to the Declaration Filed on 03/05/2009 under 37 C.F.R. 132, it has been carefully considered. However, the examiner would like to points out One can't be the export of the prior art issued to Horvitz et al. & Wical, unless she/he is one of the owners/inventors of these prior art.

As to the rest of arguments applicant either rehashes issues already addressed on record, or fails to claim the novelty of instant invention. Because the ambiguous nature of instant invention, plus applicant does not clearly point out the patentable novelty that he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. The examiner concludes that the prior art read on the claimed features

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Points of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN Y. CHEN whose telephone number is (571)272-4016. The examiner can normally be reached on Monday - Friday from 7:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mofiz Apu can be reached on 571-272-4080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Susan Y Chen/
Partial Sig. Examiner, Art Unit 2161

May 19, 2009

/Apu M Mofiz/
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